REMARKS

Claims 10-17 are active in this application.

The sole rejection that has been maintained is the rejection under 35 U.S.C. § 112, first paragraph based on an allegation that the specification does not reasonably provide enablement for methods for increasing stress resistance, in general, in plants. Applicants respectfully disagree.

First, the pending claims are not directed to increasing stress resistance in plants generally but are directed to increasing drought resistance of a plant and/or increasing the resistance of a plant to high salt conditions. These are specific methods. Furthermore, the specification describes the introducing the AtGolS2 gene to effectuate those methods.

As the Office has recognized the application on page 17 clearly states that plants transformed with the AtGolS2 genes possess improved high salt and/or drought stress condition resistance. While the examples set forth in the application only demonstrate drought resistance this is no reason to conclude that the claims are not enabled. The Applicants have made a clear correlation between the expression of the AtGolS2 genes and accumulating large amounts of galactinol which is stated on page 29, second paragraph: "these results strongly suggest that any plant body large amount of galactinol is accumulated, transpiration of water is suppressed by a mechanism, such as pore-closing control, or that the plant is provided with good drought resistance."

This conclusion is further supported by a subsequent publication[1] by some of the present inventors which characterized the AtGolS2 gene activity in plants as a osmoprotectant. In this publication, it was observed that the AtGolS2 gene expression was induced by drought and high salinity conditions (Abstract). Thus, the decrease in

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[1] Taji et al (2002) Plant J. 29(4):417-426 (copy attached).

transpiration would result in an increased retention of water which would offset the osmotic pressures of high salt conditions in the plant.

With result to the correlation between the protein and polynucleotides and the AtGolS2 gene, Applicants direct the Examiner's attention to page 24 wherein the Applicants have described that the AtGolS2 gene was amplified using primers 9 and 10 (corresponding to SEQ ID NOS: 12 and 13). In fact, looking at the nucleotide sequence of primer 9 relative to the internal sequence of SEQ ID NO:2, i.e., the AtGolS2protein sequence, the internal region matches the amino acid sequence of SEQ ID NO:2 but does not match the internal sequence of SEQ ID NO:1. The alignment of SEQ ID NO:9 and the N-terminal portion of SEQ ID NO:2 is shown below:

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SEQ ID NO:12: 5' CGCGGATCC ATG GCA CCT GAG ATC AAT ACC-3'
SEQ ID NO:2:                Met Ala Pro Glu Ile Asn Thr
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Thus, the correlation between the sequence, SEQ ID NO:2 and the DNA encoding SEQ ID NO:2 is clear to one of skill in the art.

As stated in MPEP § 2164.04, in order to make a rejection under 35 U.S.C. § 112, first paragraph, the Examiner has the initial burden to establish a reasonable basis to question enablement provided for the claimed invention. *In re Wright*, 27 USPQ 2d 1510, 1513 (Fed. Cir. 1993). The specification disclosure which contains a teaching of the manner of process of making and using an invention in terms of the corresponding scope to those used in describing and defining the subject matter sought to be patented must be taken as being in compliance with the enablement requirement of 35 U.S.C. § 112, first paragraph, unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. As discussed above, the specification does provide those statements that conclude that the AtGolS2 genes increase the plant's resistance to drought and high salt conditions. The Office has no reasonable basis to question the enablement provided for these

claimed inventions. It seems rather the Examiner is merely stating that the claims must be amended to recite what is disclosed in the examples of the specification. This, however, is not the standard applicable to assessing whether the application is enabled by the specification.

Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 112, first paragraph be withdrawn.

Applicants request that this application be passed on to issuance.

Respectfully submitted,

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